

CLAIMS

1 – 5. (canceled)

6. (previously presented) An active circuit for being coupled to a reactive circuit that provides an output voltage, comprising:

- a control regulator circuit having an output for providing pulses;
- a first switch that has an input coupled to the output of the control regulator circuit, a power supply input coupled to a power supply terminal, and an output that is an output of the active circuit;
- a pulse shaper having an input coupled to the control regulator circuit and an output;
- a reference voltage generator for providing a reference voltage that changes in response to changes in a voltage at the power supply terminal; and
- an integrator having a first input coupled to the output of the pulse shaper, a second input for receiving the reference voltage, and an output for providing a signal indicative of a current level supplied at the output voltage, wherein:
 - the reference voltage generator is responsive to a first programming signal in addition to being responsive to the voltage at the power supply terminal;
 - the first programming signal is representative of the output voltage; and
 - the first programming signal is the output voltage.

7. (currently amended) The active circuit of claim 4 6 further comprising a crowbar switch coupled to the control regulator circuit and a crowbar comparator coupled to the crowbar switch.

8. (currently amended) The active circuit of claim 4 6, wherein the pulse shaper comprises:

- a first transistor having a control electrode coupled to the output of the control regulator circuit, a first current electrode coupled to the output of the first switch, and a second current electrode; and
- a first resistor having a first terminal coupled to the second current electrode of the first transistor and a second terminal coupled to the power supply terminal.

9. (currently amended) The active circuit of claim ~~4~~ 6, wherein the integrator comprises:
a voltage-to-current converter having a first input coupled to the output of the pulse shaper, a second input to the output of the reference voltage generator, and an output; and
a capacitor coupled to the output of the voltage-to-current converter.
10. (currently amended) The active circuit of claim ~~4~~ 6, wherein the first switch comprises an N channel transistor.
- 11 - 13. (canceled)
14. (currently amended) The active circuit of claim ~~13~~ 17, further comprising a Schmitt Trigger coupled to the capacitor.
15. (currently amended) The active circuit of claim ~~13~~ 17, wherein;
the information as to the DC output voltage is a first programming signal; and
the reference means is responsive to a second programming signal.
16. (canceled)
17. (previously presented) An active circuit, comprising:
pulse means for generating current pulses from a supply voltage for use in providing a DC output voltage;
replication means, coupled to the pulse means, for generating pulses representative of the current pulses;
reference means for providing a reference voltage based on information as to the DC output voltage and the supply voltage;
comparator means, coupled to the replication means and the reference means, for generating current pulses, wherein each pulse has an amount of charge related to the reference voltage; and
a capacitor for receiving the current pulses;

wherein the information as to the DC output voltage is the DC output voltage.

18. (currently amended) The active circuit of claim ~~13~~ 17 further comprising a crowbar switch coupled to the pulse means and a crowbar comparator coupled to the crowbar switch.

19. (currently amended) The active circuit of claim ~~13~~ 17, wherein the replication means comprises:

a transistor coupled to the pulse means; and

resistor means for being coupled between the transistor and the supply voltage.

20. (currently amended) The active circuit of claim ~~13~~ 17, wherein the reference means comprises three current sources and a resistor.